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Attorney Docket No: 101769-311

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS : MARC HUSEMANN
SERIAL NO. : 10/533,831
FILED : NOVEMBER 10, 2005
FOR : POLY(METH)ACRYLATE-BASED PRESSURE-SENSITIVE
ADHESIVE
GROUP ART UNIT : 1794
EXAMINER : ANISH P. DESAI

MAIL STOP APPEAL BRIEF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

November 8, 2010

APPELLANTS' BRIEF ON APPEAL PURSUANT TO 37 CFR § 41.37

SIR:

This is an appeal from the final rejection of claims 1 and 3-16.

(I) REAL PARTY IN INTEREST

The real party in interest is tesa SE by virtue of an assignment recorded in the United States Patent and Trademark Office on November 10, 2005, at Reel 017003, Frame 0570.

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(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

(3) STATUS OF CLAIMS

In response to the Final Office Action dated June 21, 2010, the appellants filed a Notice of Appeal. There are no unentered or pending amendments to the claims.

(4) STATUS OF AMENDMENTS

The present application was filed with original claims 1-10. In a preliminary amendment dated March, 5, 2005, claims 2-10 were amended and claims 11-16 were added as new. In response to a first Office Action, claims 1, 3 and 11 were amended, claim 2 was cancelled, and claims 17 and 18 were added as new. After a Final Rejection, claims 1 and 4 were amended in a response accompanying a Request for Continued Examination (RCE). In response to the non-final Office Action after the filing of the RCE, claim 1 was amended and claims 17 and 18 were cancelled.

This is an appeal of the rejection of pending claims 1 and 3-16.

(5) SUMMARY OF THE CLAIMED SUBJECT MATTER

There is one independent claim, viz, claim 1.

Claim 1 is directed to a polyacrylate-based pressure-sensitive adhesive comprising a polymer formed from a monomer mixture comprising 60% to 85% by weight, based on the weight of monomer mixture, of acrylic and/or methacrylic esters having the formula $\text{CH}_2 = \text{C}(\text{R}_1)(\text{COOR}_2)$, where $\text{R}_1 = \text{H}$ or CH_3 and R_2 is a linear or branched alkyl radical having 1 to 14 carbon atoms, and 10% to 40% by weight of isobornyl acrylate units, based on the monomer mixture. (Page 2, lines 26-33). The pressure sensitive adhesive further

comprises aluminum (III) acetylacetonate, (page 11, line 33) and the polymer has a glass transition temperature (T_{gA}) greater than or equal to 30°C and a bond strength on steel in a tolerance range of $\pm 15\%$ in a peel-rate range of 0.1 cm/min to 100 m/min. (Page 4, lines 26-27; page 20, line 26 to page 21, line 6).

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I. The rejection of claims 1, 3, 4, 6, 7, 9, 11 and 12 under 35 U.S.C. §103(a) as obvious over Maruoka et al. (US 5,252,395) in view of Spada et al. (US 6,293,037) and McLaughlin et al. (US 6,365,793)'

II. The rejection of claims 8 and 16 under 35 U.S.C. §103(a) as obvious over Maruoka in view of Spada and McLaughlin, and further in view of Massow et al. (US 5,194,455);

III. The rejection of claims 5 and 13-15 as obvious over Maruoka in view of Spada and McLaughlin and further in view of Khieu (WO 98/24978); and

IV. The rejection of claim 10 as obvious in view of Maruoka in view of Spada and McLaughlin and further in view of Everaerts et al. (US 5,612,136).

(7) ARGUMENT

I. THE REJECTION OF CLAIMS 1, 3, 4, 6, 7, 9, 11 AND 12 UNDER 35 U.S.C. §103(a) AS OBVIOUS OVER MARUOKA ET AL. IN VIEW OF SPADA ET AL. AND MCLAUGHLIN ET AL.

The appellants respectfully submit that the Examiner has erred in rejecting the claims as obvious under 35 U.S.C. §103(a) as obvious over Maruoka et al. (US 5,252,395) in view of Spada et al. (US 6,293,037) and McLaughlin et al. (US 6,365,793).

A. At the time of the invention, a skilled artisan would not have reasonably expected that the claimed invention would be successful.

Prior art references can be modified or combined to reject claims as *prima facie* obvious only if there is a reasonable expectation that the modification or combination would have been successful. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 275 (Fed. Cir. 1986). Moreover, evidence showing that there was no expectation of success may support a conclusion that the claims are not obvious. *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976).

The appellants submit that a *prima facie* case of obvious cannot be established against the presently claimed invention because at the time of the invention, a skilled artisan could not have reasonably expected that the specifically claimed crosslinker would have worked with the specifically claimed polymer in order to produce a satisfactory pressure sensitive adhesive (PSA). This is because, at the time of the invention, it was well understood in the art that, in order to achieve sufficiently homogenous crosslink, the polarity of the crosslinker and the polymer should match. Thus, a polar crosslinker should be used with a polar polymer, or an apolar crosslinker should be used with an apolar polymer.

The PSA of the presently claimed invention is apolar due to the amount of isobornyl acrylate in the composition, while the crosslinker, aluminum (III) acetylacetonate, is polar. At the time of the invention, a skilled artisan would not have expected the claimed combination of polymer and crosslinker to achieve sufficient miscibility, which would lead to an insufficient crosslink and poor adhesive properties. In particular, the *expectation* was that the resulting adhesive would exhibit an increase in the wetting surface, and exhibit permanent adhesive and unsuitable for removability. In short, the expectation of the skilled artisan at the time of the invention was that the adhesive would not be good as a removable adhesive.

Surprisingly, however, a very polar thermal crosslinker, aluminum (III) acetylacetonate, achieved excellent miscibility in the apolar polymer composition of the present invention. Moreover, the polarity of the resulting adhesive did not increase to a level that would have caused unsatisfactory adhesion, which would defeat the entire purpose of a removable adhesive.

In support of their assertion, the appellants submitted a declaration under 37 C.F.R. §1.132 from inventor Dr. Marc Husemann, ("the Husemann declaration") stating that, at the time of the invention, there was no reasonable expectation that the presently claimed adhesive would have exhibited sufficient adhesion properties, especially with regard to removability. In particular, Dr. Husemann stated that at the time of the invention a skilled artisan would not have expected that, due to the differences in polarity, the claimed monomer combination could not be crosslinked with aluminum (III) acetylacetonate to produce a suitable pressure sensitive adhesive. Additionally, Dr. Husemann noted that the *expectation* of the skilled artisan at the time of the invention was that the resulting adhesive produced from the crosslinking of an apolar polymer with a polar crosslinker would have permanent adhesion, and not be suitable for removability.

The appellants submit that the Husemann declaration sets forth that at the time of the invention, a skilled artisan would not have expected that a suitable adhesive could be produced from the claimed monomer combination and the claimed crosslinker.

**1. The Examiner failed to give proper weight to the
Husemann declaration**

The appellants submit that the Examiner failed to give proper evidentiary weight to the Husemann declaration.

The Examiner stated with respect to the Husemann declaration that the "aforementioned arguments are not commensurate in scope with the scope of the presently

claimed invention. Claims do not require, e.g. adhesive having homogenous crosslink and/or ease in removability from a surface.” (Advisory Action, page 3, paragraph 4). First, the appellants submit that the Husemann declaration is *not* an argument, but a recitation of the knowledge and understanding of skilled artisans at the time of the invention. Dr. Husemann, a Ph.D chemist for over 14 years with over 12 years direct experience in polymer chemistry is clearly a person of ordinary skill in the art, and his sworn statements should be regarded as establishing the level or skill in the art at the time of the invention. It should not be considered as “argument”. Second, Dr. Husemann’s remarks regarding the crosslink and removability were mentioned as properties that a skilled artisan would have *expected* would not be achieved due to the divergent polarities of the monomers and crosslinkers; it is not necessary that these properties be included into the claim. Indeed, it is not that the appellants have argued that unclaimed properties distinguish the claimed invention from the prior art, it is that a skilled artisan, at the time of the invention, would *not have reasonably expected* the claimed adhesive to exhibit sufficient crosslink or removability.

The Examiner also stated that the declaration “fails to show any data in support of the applicant’s assertion in sections 5-6 of the declaration...Further, the Examiner notes that evidence must show that the results are indeed unexpected (see MPEP 716.02)”. (Advisory Action, page 3, paragraph 5). It appears that the Examiner has misinterpreted the present issue—the appellants have not attempted to rebut a *prima facie* case of obviousness with unexpected results; rather, they argue that a *prima facie* case cannot be established because a skilled artisan, at the time of the invention, did not have a reasonable expectation that the claimed invention would be successful. Comparative data is not necessary to establish the level of ordinary skill in the art at the time of the invention. Dr. Husemann’s statements regarding the knowledge available to skilled artisans at the time of the invention are sufficient to establish a lack of any reasonable expectation of success.

Based on the foregoing reasons, the appellants submit that the Examiner failed to give the Husemann declaration the proper weight and consideration.

2. The burden of proving that a skilled artisan had a reasonable expectation of success has been shifted back to the Examiner

The appellants submit that they have satisfied their burden of showing that a skilled artisan lacked any reasonable expectation of success at the time of the invention through the Husemann declaration and the arguments submitted in support thereof. Accordingly, the burden of proof now rests with the Examiner, who must disprove or rebut that a skilled artisan would not have a reasonably expected that the claimed invention to be successful. The Examiner has yet to offer any rebuttal in this regard.

B. The Examiner erred by failing to provide any articulated reasoning with a rational underpinning to support the rejection of the claims under 35 U.S.C. §103(a)

In rejecting claims as unpatentable on the basis of obviousness, the Examiner *must* provide “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l. Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). Moreover, rejections based on 35 U.S.C. §103 must rest on a factual basis. In making such a rejection, the examiner has the initial duty of supplying the requisite factual basis and may not resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. See *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967). Furthermore, “rejections on obviousness grounds cannot be sustained by mere conclusory statements.” *KSR*, 550 U.S. at 418.

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To support the rejections of the claims under 35 U.S.C. §103(a), the Examiner only offers an overly broad statement that that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to add aluminum (III) acetylacetonate crosslinker as taught by McLaughlin in the acrylic PSA of Maruoka as modified by Spada, motivated by the desire to provide PSA with suitable cohesiveness, and given that Maruoka desires crosslinkers". (Final Office Action, page 5, paragraph 16).

The Examiner's rationale for rejecting the claims is based simply on the notion that because the adhesive achieved by combining Maruoka and Spada can be crosslinked, that it would be obvious to crosslink with aluminum (III) acetylacetonate in view of McLaughlin. It should also be noted that the adhesive that the Examiner wishes to modify by combining with McLaughlin's crosslinker does not even exist in the prior art; it only exists in the Examiner's in the Examiner's proposed modification of Maruoka in view of Spada. So, Maruoka's teaching of being "open to crosslinkers" (Final Office Action, page 11, paragraph 38) can be considered only with regard to Maruoka's adhesive, *not* with regard to adhesive does not even exist in the prior art except in the Examiner's proposed modification in view of Spada. There are no other facts or teachings of the prior art presented by the Examiner to support this rejection.

The Examiner failed to provide any articulated reasoning sufficient evidence to rationalize *why* it would have been obvious to combine the teachings of the prior art in order to achieve the present invention. Simply stating that "it would have been obvious", without any further reasoning or rational underpinning, to combine the elements of the prior art to achieve the invention because the references do not teach away from their combination is nothing more than a conclusory statement, and cannot support a finding of obviousness under 35 U.S.C. §103.

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II. THE REJECTION OF CLAIMS 8 AND 16 UNDER 35 U.S.C. §103(a) AS OBVIOUS OVER MARUOKA ET AL. IN VIEW OF SPADA ET AL. AND MCLAUGHLIN ET AL, AND FURTHER IN VIEW OF MASSOW ET AL. (US 5,194,455).

The Examiner rejected claims 8 and 16 under 35 U.S.C. §103(a) as obvious over Maruoka in view of Spada and McLaughlin, and further in view of Massow et al. (US 5,194,455). The appellants hereby incorporate by reference the foregoing remarks with respect to the rejection of claims 1, 3, 4, 6, 7, 9, 11 and 12 over Maruoka, Spada and McLaughlin, and further submit that there is nothing in Massow that would remedy the deficiencies of the prior art references and the Examiner's rejections, discussed hereinabove. Accordingly, the appellants submit that a *prima facie* case of obviousness cannot be established against claims 8 and 18 over Maruoka in view of Spada, McLaughlin and Massow.

III. THE REJECTION OF CLAIMS 5 AND 13-15 UNDER 35 U.S.C. §103(a) AS OBVIOUS OVER MARUOKA ET AL. IN VIEW OF SPADA ET AL. AND MCLAUGHLIN ET AL., AND FURTHER IN VIEW OF KHIEU (WO 98/24978)

The Examiner rejected claims 5 and 13-15 under 35 U.S.C. §103(a) as obvious over Maruoka in view of Spada and McLaughlin, and further in view of Khieu (WO 98/24978). The appellants hereby incorporate by reference the foregoing remarks with respect to the rejection of claims 1, 3, 4, 6, 7, 9, 11 and 12 over Maruoka, Spada and McLaughlin, and further submit that there is nothing in Khieu that would remedy the deficiencies of the prior art references and the Examiner's rejections, discussed hereinabove. Accordingly, the appellants submit that a *prima facie* case of obviousness cannot be established against claims 8 and 18 over Maruoka in view of Spada, McLaughlin and Khieu.

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**IV. THE REJECTION OF CLAIM 10 UNDER 35 U.S.C. §103(a) AS
OBVIOUS OVER MARUOKA ET AL. IN VIEW OF SPADA ET AL. AND
McLAUGHLIN ET AL., AND FURTHER IN VIEW OF EVARAERTS (US 5,612,136).**

The Examiner rejected claim 10 under 35 U.S.C. §103(a) as obvious over Maruoka in view of Spada and McLaughlin, and further in view of Evaraerts (US 5,612,136). The appellants hereby incorporate by reference the foregoing remarks with respect to the rejection of claims 1, 3, 4, 6, 7, 9, 11 and 12 over Maruoka, Spada and McLaughlin, and further submit that there is nothing in Evaraerts that would remedy the deficiencies of the prior art references and the Examiner's rejections, discussed hereinabove. Accordingly, the appellants submit that a *prima facie* case of obviousness cannot be established against claims 8 and 18 over Maruoka in view of Spada, McLaughlin and Evaraerts.

(8) CONCLUSION

In view of the foregoing, the appellants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly, the appellants respectfully request that the Honorable Board reverse the final rejection.

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ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No.

14-1263.

Respectfully submitted,

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(9) CLAIMS APPENDIX

Claim 1. (Previously Presented) A polyacrylate-based pressure-sensitive adhesive comprising a polymer formed from a monomer mixture comprising:

a) 60% to 85% by weight, based on the weight of monomer mixture, of acrylic and/or methacrylic esters having the formula $\text{CH}_2 = \text{C}(\text{R}_1)(\text{COOR}_2)$,

where $\text{R}_1 = \text{H}$ or CH_3 and R_2 is a linear or branched alkyl radical having 1 to 14 carbon atoms, and

b) 10% to 40% by weight of isobornyl acrylate units, based on the monomer mixture,

wherein said pressure sensitive adhesive further comprises aluminum (III) acetylacetonate, and the polymer has a glass transition temperature (T_{gA}) greater than or equal to 30°C and has a bond strength on steel in a tolerance range of $\pm 15\%$ in a peel-rate range of 0.1 cm/min to 100 m/min.

Claim 2. (Cancelled)

Claim 3. (Previously Presented) The pressure-sensitive adhesive of claim 1, wherein said monomer mixture further comprises

c) up to 30% by weight of olefinically unsaturated monomers containing functional groups.

Claim 4. (Previously Presented) The pressure-sensitive adhesive of claim 1, wherein said component a) comprises acrylic and methacrylic esters having alkyl groups which have 4 to 14 carbon atoms.

Claim 5. (Previously Presented) The pressure-sensitive adhesive of claim 1, comprising tackifier resins.

Claim 6. (Previously Presented) The pressure-sensitive adhesive of claim 1, further comprising additives selected from the group consisting of plasticizers, fillers, nucleators, expandants, compounding agents and aging inhibitors.

Claim 7. (Previously Presented) A single-sided or double-sided adhesive tape or transfer

tape comprising at least a carrier and a layer of the pressure-sensitive adhesive of claim 1.

Claim 8. (Previously Presented) The single-sided or double-sided adhesive tape or transfer tape of claim 7, wherein the thickness of said layer of pressure-sensitive adhesive is at least 5 μm .

Claim 9. (Previously Presented) The single-sided or double-sided adhesive tape or transfer tape of claim 7, wherein the carrier is made of a film selected from the group consisting of polyester, PET, PE, PP, BOPP and PVC, or of a nonwoven, foam, woven fabric, or woven film, or of release paper.

Claim 10. (Previously Presented) A method for bonding an adhesive tape to automotive finishes, which comprises bonding an adhesive tape of claim 7 to said automotive finishes.

Claim 11. (Previously Presented) The pressure-sensitive adhesive of claim 12, wherein said component b) is present in an amount of 15% to 40% by weight, based on the weight of monomer mixture.

Claim 12. (Previously Presented) The pressure-sensitive adhesive of claim 4, wherein said alkyl groups have 4 to 9 carbon atoms.

Claim 13. (Previously Presented) The pressure-sensitive adhesive of claim 5, wherein said tackifier resins are compatible with the polymers.

Claim 14. (Previously Presented) The pressure-sensitive adhesive of claim 5, wherein said tackifier resins are present in an amount of up to 40% by weight, based on the weight of pressure-sensitive adhesive.

Claim 15. (Previously Presented) The pressure-sensitive adhesive of claim 14, wherein said tackifier resins are present in an amount of up to 30% by weight, based on the weight of pressure-sensitive adhesive.

Claim 16. (Previously Presented) The single-sided or double-sided adhesive tape or transfer tape of claim 8, wherein said layer of pressure-sensitive adhesive is at least 10 μm

thick.

Claim 17. (Cancelled)

Claim 18. (Cancelled)

(10) EVIDENCE APPENDIX

1. Declaration under 37 C.F.R. §1.132 dated May 31, 2010 from Dr. Marc Husemann.

(11) RELATED PROCEEDINGS APPENDIX

None.